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March 1998



FIRST CLASS MAIL



Pikes Peak Radio Amateur Association, Inc.
P.O. Box 16521
Colorado Springs, Colorado 80935

1 Renew before 03/31/00
 RONALD DEUTSCH
 NK0P
 4305 RIDGELANE DR.
 COLO. SPRGS., CO 80918



O-Beat



Pikes Peak Radio Amateur Association Officers and Directors

President: Greg Tarcza	WA2OOD	597-7064	gregt@col.hp.com
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*This Officer/Director is completing the second year of the two-year term to which they were elected.

The O-Beat is published monthly in the interest of the members of the Pikes Peak Radio Amateur Association, Inc., PO Box 16521, Colorado Springs, Colorado 80935. For membership and subscription information see the last page of this publication. Monthly advertising rates: Full page, \$48; Half page, \$24; Quarter page, \$12; Business card, \$6. These rates are billed quarterly. Send your ad requests and payments to: PPRAA, PO Box 16521, Colorado Springs, Colorado 80935.

Check out the PPRAA page on the World Wide Web! Go to: <http://www.col.net/ppraa>

Deadline for submission of articles or advertisements is the 20th of each month. Submissions are accepted in any form. Articles should be sent directly to the O-Beat Editor (email to kd0ju-1@juno.com is preferred.) Permission is granted to reprint articles provided credit is given to both the author and this publication.

License Exams

License examinations sponsored by the Pikes Peak Radio Amateur Association are held on the 2nd Saturday of February, April, June, August, October, and December.

Testing takes place at 9 A.M. at:

Denver Technical College
225 South Union
Colorado Springs

Everyone is seated on a walk-in basis. Those wishing to take an exam should bring the following items:

1. \$6.25 (preferably a check/money order made out to ARRL/VEC) for any exam other than element 1A or 2.
2. Picture identification.

3. A copy of your current amateur radio license, and/or a copy of any examination credit you have, as well as the signed original. We keep the copies.

4. A pen, pencils, and a calculator if you need one.

If you have any questions, call Erik Mugele, KG0XE at 596-5345. Please do not call Denver Technical College.

Committee Chairpersons/Contacts

O-Beat Editor	Bill Pierce	KD0JU	550-0406
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Auditing	Any Volunteer's?		
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ARES Liaison	Mike Stansberry	K0TER	636-1290
CCARC Liaison	Ron Deutsch	NK0P	593-8352
RACES Liaison	Bryan Curl	N0LUF	575-8400

Reminder — General Membership Meeting

The next General Membership meeting of the Pikes Peak Radio Amateur Association will be on the second Wednesday of this month at the Irving Middle School 1702 N. Murray. The meeting will start at 1900.

RockFest Directions

Here is the directions for:

Denver Radio League C-Rock Fest
Douglas County Fairgrounds*
March 14, 1998 - 8a-1p
Admission \$4, Tables \$12 in advance,
Tailgating \$6
Talk-in 146.88

I-25 north/south to Exit #181, turn East onto Plum Creek Parkway. Proceed east on Plum Creek Pkwy *through* the stoplight to the first stop sign. Turn left (north) at the stop sign and you're there.

*Address is: 1 Fairgrounds Rd, Castle Rock CO 80104

Fairgrounds Phone# is 688-2559

ANNOUNCEMENT March Meeting

March PPRAA meeting place will be in the cafeteria at Irving Middle School 1702 N. Murray at 1900. All are welcome to come and observe and/or participate. The program will be an Auction. Bring all your old parts, junk and stuff to auction off!

ANNOUNCEMENT Next Board Meeting

Next board meeting will be at QTH of Bill Petty on March 16th. Directions forthcoming via email.

ARES Training Announcement

The Damage Assessment training that the Pike's Peak Chapter is offering will be on March 14, 1998. The time is 9a.m. to noon. The location is 1600 North Cascade Avenue in Colorado Springs. If you have not signed up yet please respond via email at

ghipszky@kktv.com or call me at 528-8361 and leave a message.

Ginger NØUOD

PPARES Dist. 14 Training Coordinator

President's Corner

By Greg Tarcza, WA2OOD

March, 1998

I figured that the column I wrote last month about why folks don't stick around for meeting programs would push a few "hot buttons" and I was right. A couple of people talked to me before and after the meeting to give me their views on the subject and I appreciate all of those comments, which ranged from "the topic doesn't interest me this month" to "the technical level is always way over my head." I also got a few really good ideas on how to implement fixes to at least one of those concerns.

The quick answer to both of the above comments is "stick around for the program anyway, you might learn something!" I know that won't satisfy those that made the comments, but it is the best I can offer for now. We still need a better long-term solution for programs. A very simple philosophy could provide the answer - if each of us puts more into the club, we will all get more out of it.

Jeff Boyes is trying to come up with interesting programs for the rest of the year, but he needs your help. Please give him a call with program ideas or, better yet, with an offer to put on a program. For those who have put on an Elmer Net program, can your program be expanded (with useful information) to cover a meeting program?

For March, we are going to try something really different. Those that were in the club as little as 25 years ago may remember the annual auctions that we had. Folks would dredge up some really interesting goodies from their shacks to sell at these events. These auctions were a lot of fun, especially when the auctioneer couldn't quite figure out what the item for

sale was! Well, we're going to try an auction again. Because of the change in meeting location (Irving Middle School - just South of Constitution on Murray Blvd), we will need to severely limit the length of the auction (the auctions in past years went on until 2AM or later - with excellent attendance), but we'll do our best to sell as much as we can. Expect a fast-paced auction. Start digging up items for sale now! Big and small items are fine. You won't want to miss this meeting program! Bring money! Bring goodies!

By the way, I'm always willing to listen to your comments on how to improve the club and its activities. Give me a call and we'll talk.

Greg Tarcza, WA2OOD

Notes from your Activities Director!!!

Hi!

As your Activities Director, it has come to my attention that the only time we socialize as friends are at Christmas time and the Picnic. I would like to change that! Also, it seems as if we have a participation problem. I have a few ideas to help in that area also (but I am not ready to share yet.) I have come up with the idea to have monthly outings with our families. Starting with April we will be meeting on the third Saturday of each month for some interesting activities. The point of these activities is to allow us to enjoy each other's company and have a chance to get to know each other away from the day to day business of the club. Now these activities will not always have something to do with ham radio other than that is our common ground. They are meant to be a way for us to have fun and to meet each other's non-ham family members. So bring the family and come on out.

In April on the 18th at 12:00 noon we will meet at Fox Run Park for a picnic lunch and what I like to call "Hams and Eggs". To find out what this is you'll have to come to Fox Run Park! I will tell you that there are prizes involved.

I hope that all of you will pack a picnic lunch and join us for a great time. Because this is springtime in Colorado we will let you know if we need to cancel the day of the activity on 146.97. Keep watching this space for some more exciting things to come in the next few months. If any of you have any other ideas, please feel free to share them by dropping a note in the suggestion box. Thanks for your help.

Renay KAØROY

OM/YL LUNCH BUNCH

The Country Buffet at the Citadel Crossing Shopping Center will be the location of the next Lunch Bunch.

We meet at noon, but some arrive earlier. Everyone is cordially invited!

If you have a question our phone is 471-9965.

73
WAØMNL, Rosie

General Membership Meeting February 11, 1997

President Greg, WA2OOD, called meeting to order at 1900. Members present introduced themselves.

Secretary NØCMW asked if he could get a volunteer to attend board meeting and take minutes if board meeting fell on 3rd Monday of month starting in March. Renay KAØROY volunteered.

WA2OOD announced it was Bill KDØJU our Ø-Beat editor's birthday George WBØDUM announced that Mike WØMHL passed away recently.

Greg showed copy of our web page, Jeff NØJLH web master made some comments on it (<http://www.qsl.net/ppraa>).

Greg WA2OOD announced that our March meeting would be at Irving Middle School, corner of LaSalle and Murray.

Minutes of January were read and approved with the following correction correct call for Jeff Boyes is NØJLH. This needs to be corrected in roster of officers and directors besides where secretary made mistake [Done! Ed.]

Activity report by Renay KAØROY our annual picnic will be at Air Force Academy picnic area #3 on Sunday August 16th. Put suggestions for any activities you would like club to participate in the suggestion box. Assets Mike KØTER no action on inventory yet.

Public relations Mike KØTER, passed out certificates for JOTA (jamboree on air) Dennis NØABC said freezoree was a success with the scouts will do it again next year.

Mike KØTER April 25 March dimes walk needs volunteers.

Rob N7LV has waiver forms for Hill Climb in July.

CCARC Ron NKØP nothing to report.
Historian Jody KAØROZ needs stuff from any one.

Interference Bill NØNJX nothing to report.

Membership Les KCØNC watch your expiration date on Ø-beat especially if highlighted in yellow.

Please use suggestion box. Programs Jeff NØJLH needs help on suggestions for programs for our meetings. Listen to nets on 37/97 as programs will be announced there and in Ø-Beat.

Publicity Ron NKØP nothing.
Swapfest Rob N7LV He has plenty of tickets for raffle, swapfest May 2nd at Doherty High School 4515 Barnes Rd.

VE Testing see Ø-Beat.

JODY KAØROZ awarded Hammy to Moe WBØRTF.

New business Rob N7LV and John KO6TN brought up about having a Rocky Mountain Division conference in the year 2000 here in Colorado Springs. Division Director and staff are for it. We had quite a discussion pro and con on it. It was decided they would continue looking into this matter.

Rob brought up that district 20 was looking into NASA having a learning center here, he will contact them to see if amateur radio might fit in with their plans.

Bob NØRNQ said he had been contacted about a silent key W9KGO estate had lot of gear to get rid of, he will make further contact into this and keep us informed.

Our program this evening was a slide show presentation by the president of the International Tesla Society, J.W. McGinnis, it was interesting, and Meeting adjourned at 21.30 by PRESIDENT GREG WA2OOD.

Submitted by AI NØCMW secretary.

BOARD MEETING

Feb 16th, 1997

President Greg WA2OOD opened the meeting at 19.00, at qth of AI NØCMW. Present were Greg WA2OOD, Moe WBØRTF, Bill KDØJU, Renay KAØROY, Aaron KD6FLM, Bill NØNJX, Les KCØNC, Jody KAØROZ, Jeff NØJLH, AI NØCMW, Ron NKØP, Rob N7LV.

Greg had a letter from PPARES offering us \$30.00 for trailer hitch and couple folding chairs that were in trailer when we sold it to them. AI made motion and Jeff second it to accept their offer, after discussion it was passed unanimously.

Les brought up about priority of contents of Ø-Beat articles. It was decided to leave it up to Ø-Beat editor to make decision with priority given to PPRAA articles if possible.

Jody says she now has a lot of old history stuff, thanks to Ron and Al Craig N2IWZ.

Ron brought up about a useful publicity sheet he was making up that could be handed out to those attending swapfest and other places about the PPRAA. He had an idea on buying prizes for swapfest, that some businesses had a buying rebate offer that would almost cover the cost of the item. Ron presented some bills from Al Craig for folders and other things he had bought to catalogue the history he had collected, motion was made and passed to pay him \$125.28. (He had receipts for all of it)

Renay working on a couple of activity events for the club to come on a Saturday afternoon. One will be at Fox Run Park in Black Forest, in April.

Jeff needs help with getting programs together; it was decided to have an auction of Amateur related items at our March meeting. Items will be auctioned off one at a time, each person one item, and then start back over with 1st person. NOTE all items will be for cash only. PPRAA will get 10 percent of what an item goes for. The program for April is tentatively Nick KG5N on techniques for construction projects.

Rob gave Jody some more old stuff he had gathered up for the historian. He said that Amsat had come through with a Sarex schedule for Prairie Hills Middle school on April 24th. Ø-Beat editor Bill asked about putting articles for Dits and Bits from non hams. It was decided to charge \$2.00 for 25 words or less, the sale item had to be amateur related. Ø-Beat editor and Jeff our web page master will work out putting articles from Ø-Beat on our Web page. Meeting adjourned at 20.15 for refreshments from Al and Marie.

Submitted by Al NØCMW secretary.

Treasurer's Report for period ending 10/31/97

I apologize for not getting a treasurer's report out this month. I'll include it with the next treasurer's report in next month's Zero Beat.

Rob, N7LV

MIR Contact! At Last!

What a thrill! About 300 kids in the gym, all three networks with a video crew there, 10 excited kids waiting to ask their questions, and a great crew of radio operators and video camera operators.

All of this came together at slightly after 9:07 MST Tuesday morning when we finally made the contact with astronaut Andy Thomas on Mir.

All the people in the gym at Prairie Hills Elementary School in Colorado Springs watched closely as the overhead display showed Mir on its track to Colorado Springs while they listened to the static over the gym's PA speakers. When Andy Thomas' voice broke through the static, I'm sure I could almost hear plenty of suppressed "Yea!" expressions. Andy talked for several seconds, describing what he's doing on the Mir. Then the kids asked their questions and Andy answered all that he could hear. By the seventh question, Mir was dropping rapidly toward the horizon and we were losing the signal quickly. Unfortunately Andy answered only six questions, but our two speakers answered the rest.

Following the contact, our two guest speakers answered yet more questions for about another half an hour from excited kids. Maj Mike Caylor from the USAF Academy and Eric Joern, formerly with NASA for about 10 years training the astronauts, answered many more questions. There were a lot of future astronauts sitting in that gym!

We first applied for this contact back in 1994. I was hoping that my daughter, then in the second grade, could participate. (She's now in 6th grade and no longer attends Prairie Hills Elementary, and wasn't able to participate.) After about a 3 year wait (apparently normal for SAREX or Mir scheduled contacts), we were assigned a window in May 1997. But as you may recall, Mir had a small fire, a collision, and problem with oxygen generation just prior to that time. All school contacts are very low priority and were put on hold indefinitely. When school resumed last fall, we were supposed to get a contact with the previous astronaut, Jerry Linenger, but that fell through when the antenna on Mir was damaged in a space walk. Finally, everything got back on track, but we only had 8 days to get ready for Tuesday's contact. Everything came together fairly well, thanks to all 70+ people that contributed to the effort.

Gotta say "Thanks!" to all that helped out. Just one or two people really couldn't have done this. It really was a team effort, from the people that loaned the equipment, to the people that helped with the installation of the antennas, the publicity to get the word out, to those that came this morning and to the staff at Prairie Hills Elementary.

All three network TV stations in Colorado Springs (KKTU-11, KRDO-13, and KOAA-5/30) gave excellent media coverage to the event, to the Pikes Peak Radio Amateur Assn, and to amateur radio in general.

There is a web site, which chronicles the last couple of months, and we'll be putting up a few photos when the photos are scanned. The URL is <http://www.qsl.net/n7lv/mir.htm>. There'll be more details on the contact in a future issue of Zero Beat.

Rob, N7LV

Any member who wishes to run an ad, please send via email to the editor (kd0ju-1@juno.com) before the Monday after the board meeting. Non-members will

be charged a nominal fee for their ad to be run for 2 months. Thanks, Bill, KD0JU

If you sell any item, please email or call the editor to add to or discontinue your ad. All ads will be discontinued after two issues unless notified otherwise or if space needed for other reasons.

Thanks,
Editor



Dits and Bits

FOR SALE:

Triex W-51 crank up tower - \$1300.
HiGain Explorer-14 Triband beam - \$300
Hy Gain 2 meter vertical - \$25
Cushcraft 1/2 2meter beam - \$ 25
Ham IV rotator - \$400

You remove the tower. Everything together including coax & cables = \$1500.

Call Frank - KL7IPV in Las Vegas at 702-310-4276 or leave me a message at Colo Spgs at 597-2406.

Other "stuff" there too. Call, ask!
73, Frank.

Amateur Radio Class Update

Starting the week of February 16, 1998 the Technician grade classes will be starting at the Tesla Society. These classes will run through March 11th, 1998, Monday and Wednesday evenings at 7PM MST, on which night there will be another VE test session at 7PM. These testing sessions are open to anyone that wants to test out on that evening.

The last test session was held on the evening of February 11, 1998 at the end of the Novice Classes. The results are as follows:

26 people at the session
24 from the classes

Students that passed element 2 (Novice) = 22 =
91.6% pass rate

Students taking element 1A (5WPM code) = 3
Students passing 1A = 2 = 66.6% pass rate
Number of Novice licensed earned = 2 = 8%

Number of students taking elements 2 and 3A
(Technician) = 5
Students passing element 3A = 5 = 100% pass rate
Number of Technician licensed issued = 5 = 22.7%

Total number of licenses issued = 7 = 29.1%

There were 29 students in the class.

Sorry that I do not have the calls but there has been a problem with the computers at ARRL, but will report all the calls after the next test session on March 11th at the Tesla Society.

CONGRATULATIONS TO EVERYONE !

Linda K. Hedges - KBØRKW

1998 FREEZOREE

Yes, the '98 Freezoree has been and gone. On Saturday, January 31st, we operated three stations (HF, VHF, and UHF) from about 8:15 AM to 4:30 PM, demonstrating a small part of the fun and thrill of amateur radio to a large number of Boy Scouts. There were a lot more scouts finding out about ham radio during this event than were at the JOTA last fall. But I suspect we didn't even see a quarter of the 3400 reported to be at the Freezoree; we anticipate having better internal publicity (being included on scouts' checklists, etc.) and having the amateur radio tent better identified next year.

I think that HF had a slight edge on being the hit of the ham radio tent, due to the DX contacts around the US. Sorry, Mike, that you didn't get to do the "ditty-

bop" (CW) thing as you would've liked, but it would've slowed things down some. Besides, the Georgia and/or New York accents don't come through on CW! As I recall, there were contacts with NY, NJ, GA, FL, TX, AZ, CA, and WA. VHF and UHF were in constant use, also. One scout must've spent 30-40 minutes on one QSO alone (poor Rosie!). It would be nice to show a wider assortment of operating modes next year: maybe packet, ATV, and possibly satellite. The satellite antennas might help to draw attention to us, as well!

I would like to say thanks to all those who helped at the academy with setup and operating (and moral support!), such as Mike KØTER, George WBØDUM, Rex KIØBJ, Rob N7LV, Mike KBØIAP, Ted NØNKG, Jack KBØZGI, John NØQJS, John KO6TN, Margee KC6NEJ, and Phil KC5LXC. Thanks a lot!!!

It wouldn't have been possible without you!

Thanks also to those of you locals who communicated with the scouts; obviously, they needed somebody to talk to, so without you it wouldn't have worked so well! Forgive me for any omissions, but from my notes and memory: WØRW (thanks for not chewing me out about the 1x1 call so close to yours!), WAØMNL, WBØDUM, NØSFP, KC7GOL, WA2OOD, KBØIAP, KCØAGG, KAØYPX, KC5LXC, KBØUVG, KBØREF, plus those that I know I'm missing!

Cadet Wright and I discussed how things went, and how to improve things for next year. We agreed that it was a beneficial event for the scouts, and it will be vigorously promoted for next year.

Again, my thanks to all who helped out on the '98 Freezoree!!!

73

Dennis, NØABC

From the Editor

I would like to thank the following people for articles submitted: President Greg, WA2OOD; Rob, N7LV; Renay, KAØROY; Al, NØCMW; Rosie, WAØMNL; Linda, KAØRKW; Rick, KDØSU; Jan, NØQT; Dennis, NØABC; Frank, KL7IPV; and Ginger, NØUOD.

The Island Memory Keyer

By Rick, KDØSU

Last summer I purchase the Island Memory Keyer from Chuck Olson, WB9KZY at Jackson Harbor Press thinking it would be a great addition to my QRP gear. When it arrived I quickly inventoried the kit to see that all of the parts were there and put it on the workbench with several other projects I had in the works. I did buy most of the components I needed to complete the kit (switches, pots, and jacks) as well as a small box at the local surplus store. Due to my great procrastination I did not start building until this fall around Thanksgiving.

I started by doing the easy part, putting all of the components on the circuit board. I followed a suggestion in the directions and put machined DIP sockets in the board for all of the external connections. This allows you to connect the wires from the various switches to the board by plugging the wires into the sockets rather than soldering them to the board. It does help with troubleshooting and making changes later on. The components all go on the board rather easily, and IC sockets are provided for the two ICs in the keyer.

Once the board was assembled, I proceeded to mount the switches, pots and jacks on the box I had selected. I mounted the four memory switches on top of the box to make them more readily accessible during operation. I was using a memory keyer with the switches on the front, and every time I pushed one of the buttons the keyer would slide back a

bit on the bench. The other three switches (speed readout, program, and reset/kill) I mounted on the front of the box along with the volume control and speed control pots. I mounted three jacks on the back of the box, paddles in, straight key in, and transmit jack. I ran the power leads directly out the back, you may want to use a power jack of your choice.

The keyer circuit board comes without any mounting holes. There is room to drill a mounting hole in one corner. I did that and used a small standoff to mount the board in the center of the box. Once the board was in place I connected all of the wires from the switches, jacks, etc. to the board by plugging them into the DIP sockets I mentioned previously. I installed the ICs at that point and was ready to fire it up.

As luck would have it I had the wires for the dit and dah paddles reversed. That was an easy fix since I had plugged everything into the board rather than soldering. Once the wires were reversed the keyer worked great. One other small problem arose when I turned the keyer down to the lowest speed. It was about 18 WPM! OK for some folks, but it should go slower. The directions mention that some 1 M Ω pots don't actually have enough resistance for the slow speed. I added a 100 K Ω resistor in series with the speed control pot, and it slowed down to about 13 WPM. I left it that way since I usually switch to a straight key at slower speeds. The top speed seems to be about 44 WPM, way beyond my capability.

This keyer is certainly small enough and inexpensive enough to be built into most QRP rigs or any other rig for that matter. I packaged mine separately because I did want the flexibility to use it with several different rigs. Some of the keyer's features are:

- Four memories of about 128 characters each
- Audio speed readout in CW
- Pot for speed control
- Low power consumption
- Memories programmable with straight key input
- Retains memory without power applied
- Sidetone output to speaker
- Sidetone frequency can be programmed

This keyer is now available from Milestone Technologies in Denver, I am not sure whether you can still get it directly from Jackson Harbor Press or not. The basic kit contains the circuit board and all of the board mounted components. Marshall Emm, N1FN, at Milestone Technologies is also selling a kit that contains the other components you need to complete this project, except for the enclosure and battery holder or power connection. The current cost is \$21.95 for the keyer and \$12 for the hardware kit. Usual disclaimer, I have no connection with either of the companies involved.

I am very pleased with this kit. It does not have step by step instructions that some kits do, but it is fairly easy to construct. The keyer uses very little current, and also retains its memory when it is turned off or power is disconnected. Chuck Olson does have a Qbasic program available to use a computer to program the memories. I haven't found it necessary, but it may depend on your sending skill. Like most memory keyers it does take some practice to load the memories, but you get used to it very quickly. One interesting feature, if you send a series of dits and dahs that the keyer doesn't recognize as a valid character, it will store 8 dits as an error symbol in memory!

I really enjoyed building the kit, and I enjoy using it. One of the reasons I built it of course was to take it out when I take my QRP rig and go camping. That may have to wait for a little warmer weather.

WØRW submitted the following via the various email lists, thanks!

The Boneyard Bluebook

The Boneyard Bluebook is BACK (well kinda!) Are you curious about the value of your boatanchors? Not sure what you should pay for a KWM-2 this year? Try consulting the BONEYARD BLUEBOOK available on-line at:

<http://www.mnsinc.com/bry/ham/boneyard.htm>

It's just getting going! I am going to add a lot more soon. If you see any BA brands that I missed out, please let me know!

73 de AF4K - Bry

QUARTZ CRYSTALS ARE ALIVE AND WELL!

Check it out!! The first is for trading with other hams and QRP'ers:

<http://www.mnsinc.com/bry/xtalpage.htm>

Want to sell some rocks or buy some? Let me know and I will put your ad on there too!

Also, this one is a list of many suppliers worldwide!

<http://www.mnsinc.com/bry/mega/xtals.htm>

Great stuff - enjoy!

		25		Academy	83	Black Forest Recreation Area		La Foret	
		Road	Dir	Near	Exit #	Time	Dist	Mi	
	1	START - Exit I-25 Exit 146 Mile Marker 146, CO							
	2	I-25	SE			0:00	0.0	0.0	
	3	Garden Of The Gods Rd	E			0:00	0.0	0.7	
	4	Austin Bluffs Pkwy	E			0:01	0.6	4.4	
		Barnes Rd	E			0:13	5.0	0.2	
		FINISH - 4515 Barnes Rd, 80917							

Total Distance: 5 Mi, Total Time: 0:13



Miley's Radio

Jess, KØTAA

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Florence, Colorado 81226

(719) 784-3040

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Miley radio will be closed from Friday May 1st to
Tuesday May 12th for Colorado Springs hamfest
May 2nd and Grandjunction May 9th. Jess Miley

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P.O. Box 16521, Colorado Springs, Colorado 80935

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Email Address _____

Are you an ARRL member? Yes ☐ No ☐

One year membership rates. (Year starts with the month you receive your first issue.)

Full Member \$15.00 ☐ Family Membership (same address) \$18.00 ☐Over 65 \$12.00 ☐ Family Membership (both over 65) \$12.00 ☐Associate \$12.00 ☐ Newsletter only \$12.00 ☐

Additional Names: _____ Call _____ Class _____

Please Note: You must submit a completed application form along with your check to the Treasurer
for both new members as well as renewals. Thank you. PLEASE TYPE OR PRINT CLEARLY!